

**APPENDIX A: FINAL RULE CHANGES**

Part 2 of Title 47 of the Code of Federal Regulations is amended as follows

- 1 The authority citation for Part 2 continues to read as follows

**AUTHORITY: 47 U.S.C. 154, 302a, 303 and 336, unless otherwise noted.**

- 2 Section 2.202 is amended by appending the following entries to the end of the table in paragraph (g)

**§ 2.202 Bandwidths.**

\* \* \* \* \*

(g) Table of necessary bandwidths

\* \* \*

Description of emission	Necessary bandwidth		Designation of emission
	Formula	Sample Calculation	
Radio-relay system	$B_n = 2K/t$ $K=1.6$	Pulse position modulated by 36 voice channel baseband pulse width at half amplitude $0.4 \mu s$ , $B_n = 8 \times 10^6 \text{ Hz} = 8 \text{ MHz}$ (Bandwidth independent of the number of voice channels)	8M00M7E
Composite transmission digital modulation using DSB-AM (Microwave radio relay system)	$B_n = 2RK/\log_2 S$	Digital modulation used to send 5 megabits per second by use of amplitude modulation of the main carrier with 4 signaling states $R = 5 \times 10^6 \text{ bits per second}$ , $K = 1$ ; $S = 4$ , $B_n = 5 \text{ MHz}$	5M00K7
Binary Frequency Shift Keying	$(0.03 < 2D/R < 1.0)$ , $B_n = 3.86D + 0.27R$ $(1.0 < 2D/R < 2)$ $B_n = 2.4D + 1.0R$	Digital modulation used to send 1 megabit per second by frequency shift keying with 2 signaling states and 0.75 MHz peak deviation of the carrier $R = 1 \times 10^6 \text{ bps}$ , $D = 0.75 \times 10^6 \text{ Hz}$ , $B_n = 2.8 \text{ MHz}$	2M80F1D
Multilevel Frequency Shift Keying	$B_n = (R/\log_2 S) + 2DK$	Digital modulation to send 10 megabits per second by use of frequency shift keying with four signaling states and 2 MHz peak deviation of the main carrier $R = 10 \times 10^6 \text{ bps}$ ; $D = 2 \text{ MHz}$ , $K = 1$ , $S = 4$ , $B_n = 9 \text{ MHz}$	9M00F7D
Phase Shift Keying	$B_n = 2RK/\log_2 S$	Digital modulation used to send 10 megabits per second by use of phase shift keying with 4 signaling states $R = 10 \times 10^6 \text{ bps}$ , $K = 1$ , $S = 4$ , $B_n = 10 \text{ MHz}$	10M0G7D
Quadrature Amplitude Modulation (QAM)	$B_n = 2R/\log_2 S$	64 QAM used to send 135 Mbps has the same necessary bandwidth as 64-PSK used to send 135 Mbps, $R = 135 \times 10^6 \text{ bps}$ , $S = 64$ , $B_n = 45 \text{ MHz}$	45M0W
Minimum Shift Keying	2-ary $B_n = R(1.8)$  4-ary $B_n = R(2.34)$	Digital modulation used to send 2 megabits per second using 2-ary minimum shift keying $R = 2.36 \times 10^6 \text{ bps}$ , $B_n = 2.36 \text{ MHz}$	2M36G1D

3 The following heading is inserted before Section 2.960

“7 ELECOMMUNICATION CERTIFICATION BODIES (TCBS)”

4 Section 2.948 is amended by adding a new sentence to the end of paragraph (a)(2), by revising paragraphs (a)(3), (b)(8) and (d) and by adding a new paragraph (e)

**§ 2.948 Description of measurement facilities.**

(a) \* \* \*

(2) \* \* \* A laboratory that has been accredited in accordance with subsection (d), below, is not required to file a description of its facilities with the Commission's laboratory, provided the accrediting organization [or designating authority in the case of foreign laboratories] submits the following information to the Commission's laboratory

(i) Laboratory name, location of test site(s), mailing address and contact information

(ii) Name of accrediting organization

(iii) Date of expiration of accreditation

(iv) Designation number

(v) FCC Registration Number (FRN)

(vi) A statement as to whether or not the laboratory performs testing on a contract basis.

(vii) For laboratories outside the United States, the name of the mutual recognition agreement or arrangement under which the accreditation of the laboratory is recognized

(3) If the equipment is to be authorized under the Declaration of Conformity procedure, the laboratory making the measurements must be accredited in accordance with subsection (d) below

\* \* \* \* \*

(b) \* \* \*

(8) For a measurement facility that will be used for testing radiated emissions, a plot of site attenuation data taken pursuant to the procedures contained in Sections 5.4.6 through 5.5 of the following procedure American National Standards Institute (ANSI) C63.4-2001, entitled “American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz” published by the American National Standards Institute on June 22, 2001 as document number SH94908. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies of C63.4-2001 may be obtained from: IEEE Standards Department, 455 Hoes Lane, P.O. Box 1331, Piscataway, NJ 08855-1331, telephone 1-800-678-4333 or +1-732-981-0600 (outside the United States and Canada). Copies of ANSI C63.4-2001 may be inspected at the following locations:

(i) Federal Communications Commission, 445 12th Street, S.W., Office of Engineering and Technology (room 7-B144), Washington, DC 20554,

(ii) Federal Communications Commission Laboratory, 7435 Oakland Mills Road, Columbia, MD 21046, or

(iii) Office of the Federal Register, 800 North Capitol Street, N.W., suite 700, Washington, DC

\* \* \* \* \*

(d) A laboratory that has been accredited with a scope covering the required measurements shall be deemed competent to test and submit test data for equipment subject to verification, DoC and certification. Such a laboratory shall be accredited by an approved accreditation organization based on the International Organization for Standardization/International Electrotechnical Commission (ISO/IEC) Standard 17025, "General Requirements for the Competence of Calibration and Testing Laboratories." The organization accrediting the laboratory must be approved by the Commission's Office of Engineering and Technology, as indicated in § 0.241 of this chapter, to perform such accreditation based on ISO/IEC 58, "Calibration and Testing Laboratory Accreditation Systems—General Requirements for Operation and Recognition." The frequency for revalidation of the test site and the information that is required to be filed, or retained by the testing party shall comply with the requirements established by the accrediting organization.

(e) The accreditation of a laboratory located outside of the United States, or its possessions, will be acceptable only under one of the following conditions:

(1) If the accredited laboratory has been designated by a foreign designating authority and recognized by the Commission under the terms of a government-to-government Mutual Recognition Agreement/Arrangement; or

(2) If the laboratory has been recognized by the Commission as being accredited by an organization that has entered into an arrangement between accrediting organizations and the arrangement has been recognized by the Commission.

5 Section 2.1033 is amended by renumbering paragraph (c)(17) as paragraph (d).

6 Section 2.1055, paragraph (a)(2) is amended by adding the words "and equipment authorized for use in the Family Radio Service under Part 95 of this chapter" to the end of this paragraph.

7 The heading "FILING FOR APPLICATION REFERENCE" before Section 2.1061 is deleted.

8 Sections 2.1061 through 2.1065 are deleted.

Part 15 of Title 47 of the Code of Federal Regulations is proposed to be amended as follows.

9 The authority citation for Part 15 continues to read as follows:

**AUTHORITY: 47 U.S.C. 154, 302, 303, 304, 307 and 544A.**

10 Section 15.19 is amended by replacing the graphics in paragraphs (b)(1)(i) and (b)(1)(ii) with the following graphics.

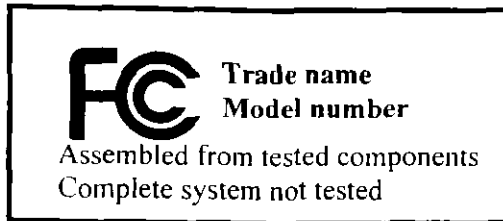
**§ 15.19 Labeling requirements.**

\* \* \* \* \*

(b)(1)(i) \* \* \*



(b)(1)(ii)\* \* \*



\* \* \* \* \*

11 Section 15.21 is amended by adding the following sentence to the end of the Section:

**§ 15.21 Information to user.**

\* \* \* \* \*

In cases where the manual is provided only in a form other than paper, such as on a computer disk or over the Internet, the information required by this section may be included in the manual in that alternative form, provided the user can reasonably be expected to have the capability to access information in that form

12 Section 15.27 is amended by adding the following sentence to the end of paragraph (a)

**§ 15.27 Special accessories.**

(a) \*\*\*\*\*

In cases where the manual is provided only in a form other than paper, such as on a computer disk or over the Internet, the information required by this section may be included in the manual in that alternative form, provided the user can reasonably be expected to have the capability to access information in that form

13 Section 15.31 is amended by revising paragraph (a) as follows

**§ 15.31 Measurement standards.**

(a) The following measurement procedures are used by the Commission to determine compliance with the technical requirements in this part. Except where noted, copies of these procedures are available from the Commission's current duplicating contractor whose name and address are available from the Commission's Consumer and Governmental Affairs Bureau at 1-888-CALL FCC (1-888-225-5322)

(1) FCC/OET MP-2 Measurement of UHF Noise Figures of TV Receivers.

(2) Unlicensed Personal Communication Service (UPCS) devices are to be measured for compliance using American National Standards Institute (ANSI) C63.17-1998, entitled "American National Standard for Methods of Measurement of the Electromagnetic and Operational Compatibility of Unlicensed Personal Communications Services (UPCS) Devices", published by the Institute of Electrical and Electronics Engineers, Inc. on March 24, 1998 as document number

SH94568 This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR Part 51

(3) Other intentional and unintentional radiators are to be measured for compliance using the following procedure excluding section 4.1.5.2, section 5.7, section 9 and section 14: American National Standards Institute (ANSI) C63.4-2001, entitled "American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz" published by the Institute of Electrical and Electronics Engineers, Inc. on June 22, 2001 as document number SH94908. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51

(i) Copies of ANSI C63.17-1998 and C63.4-2001 may be obtained from IEEE Standards Department, 455 Hoes Lane, P.O. Box 1331, Piscataway, NJ 08855-1331, telephone 1-800-678-4333 or +1-732-981-0600 (outside the United States and Canada)

(ii) Copies of ANSI C63.17-1998 and C63.4-2001 may be inspected at the following locations

(1) Federal Communications Commission, 445 12th Street, S.W., Office of Engineering and Technology (room 7-B144), Washington, DC 20554,

(2) Federal Communications Commission Laboratory, 7435 Oakland Mills Road, Columbia, MD 21046, or

(3) Office of the Federal Register, 800 North Capitol Street, N.W., suite 700, Washington, DC

14 Section 15.105 is amended by adding a new paragraph (e)

#### **§ 15.105 Information to the user.**

\* \* \* \* \*

(e) In cases where the manual is provided only in a form other than paper, such as on a computer disk or over the Internet, the information required by this section may be included in the manual in that alternative form, provided the user can reasonably be expected to have the capability to access information in that form

15 Section 15.118 is amended by changing the Federal Communications Commission's mailing address to paragraph (b) to "Federal Communications Commission, 445 12th Street, S.W., Washington, D.C."

16 Section 15.120 is amended by changing the Federal Communications Commission's mailing address to paragraph (d) to "Federal Communications Commission, 445 12th Street, S.W., Washington, D.C."

17 Section 15.201 is amended by revising paragraph (a) to read as follows

#### **§ 15.201 Equipment authorization requirement.**

(a) Intentional radiators operated as carrier current systems, devices operated under the provisions of §§ 15.211, 15.213, and 15.221, and devices operating below 490 kHz in which all emissions are at least 40 dB below the limits in § 15.209 shall be verified pursuant to the procedures in Subpart J of part 2 of this chapter prior to marketing

\* \* \* \* \*

18 Section 15.205 is amended by adding new paragraphs (d)(6) and (d)(7)

**§ 15.205 Restricted bands of operation.**

\* \* \* \* \*

(d) \* \* \*

(7) Devices operated pursuant to § 15.225 are exempt from complying with this section for the 13.36-13.41 MHz band only

(8) Devices operated in the 24.075-24.175 GHz band under § 15.245 are exempt from complying with the requirements of this section for the 48.15-48.35 GHz and 72.225-72.525 GHz bands only, and shall not exceed the limits specified in § 15.245(b)

(9) Devices operated in the 24.0-24.25 GHz band under § 15.249 are exempt from complying with the requirements of this section for the 48.0-48.5 GHz and 72.0-72.75 GHz bands only, shall not exceed the limits specified in § 15.249(a)

\* \* \* \* \*

19 Section 15.225 is revised to read as follows

**§ 15.225 Operation within the band 13.110-14.010 MHz.**

(a) The field strength of any emissions within the band 13.553-13.567 MHz shall not exceed 15,848 microvolts/meter at 30 meters

(b) Within the bands 13.410-13.553 MHz and 13.567-13.710 MHz, the field strength of any emissions shall not exceed 334 microvolts/meter at 30 meters

(c) Within the bands 13.110-13.410 MHz and 13.710-14.010 MHz the field strength of any emissions shall not exceed 106 microvolts/meter at 30 meters

(d) The field strength of any emissions appearing outside of the 13.110-14.010 MHz band shall not exceed 30 microvolts/meter at 30 meters

(e) The frequency tolerance of the carrier signal shall be maintained within +/- 0.01% of the operating frequency over a temperature variation of -20 degrees to +50 degrees C at normal supply voltage, and for a variation in the primary supply voltage from 85% to 115% of the rated supply voltage at a temperature of 20 degrees C. For battery operated equipment, the equipment tests shall be performed using a new battery

(f) In the case of radio frequency powered tags designed to operate with a device authorized under this section, the tag may be approved with the device or be considered as a separate device subject to its own authorization. Powered tags approved with a device under a single application shall be labeled with the same identification number as the device

20 Section 15.231, paragraphs (a) and (a)(3) are revised to read as follows

**§ 15.231 Periodic operation in the band 40.66 - 40.70 MHz and above 70 MHz.**

(a) The provisions of this Section are restricted to periodic operation within the band 40.66 - 40.70 MHz and above 70 MHz. Except as shown in paragraph (e) of this Section, the intentional radiator is restricted to the transmission of a control signal such as those used with alarm systems, door openers, remote switches, etc. Continuous transmissions, voice, video and the radio control of toys are not permitted. Data is permitted to be sent with a control signal. The following conditions shall be met to comply with the provisions for this periodic operation:

(1) \* \* \*

(2) \* \* \*

(3) Periodic transmissions at regular predetermined intervals are not permitted. However, polling or supervision transmissions, including data, to determine system integrity of transmitters used in security or safety applications are allowed if the total duration of transmissions does not exceed more than two seconds per hour for each transmitter. There is no limit on the number of individual transmissions, provided the total transmission time does not exceed two seconds per hour.

(4) \* \* \*

\* \* \* \* \*

21 Section 15.245, paragraph (b)(1)(i) is revised to read as follows, and paragraph (b)(1)(iii) is amended by revising the first sentence to read as follows:

**§ 15.245 Operation within the bands 902-928 MHz, 2435-2465 MHz, 5785-5815 MHz, 10500-10550 MHz, and 24075-24175 MHz.**

\* \* \* \* \*

(b) \* \* \*

(1) \* \* \*

(i) For the second and third harmonics of field disturbance sensors operating in the 24075-24175 MHz band and for other field disturbance sensors designed for use only within a building or to open building doors, 25.0 mV/m

(ii) \* \* \*

(iii) Field disturbance sensors designed to be used in motor vehicles or aircraft must include features to prevent continuous operation unless their emissions in the restricted bands, other than the second and third harmonics from devices operating in the 24075-24175 MHz band, fully comply with the limits given in Section 15.209. \* \* \*

\* \* \* \* \*

22 Section 15.255, paragraph (b)(5) is amended by changing the word "limits" to "levels"



Part 18 of Title 47 of the Code of Federal Regulations is amended as follows

- 23 The authority citation for Part 18 continues to read as follows

**AUTHORITY:** 47 U.S.C. 4, 301, 302, 303, 304, 307.

- 24 Section 18.103 is deleted

- 25 Section 18.105 is deleted

- 26 Section 18.119 is deleted.

Part 90 of Title 47 of the Code of Federal Regulations is amended as follows

- 27 The authority citation for Part 90 continues to read as follows:

**AUTHORITY:** Sections 4(i), 11, 303(g), 303(r), and 332(c)(7) of the Communications Act of 1934, as amended, 47 U.S.C. 154(i), 161, 303(g), 303(r), 332(c)(7).

- 28 Section 90.203 is amended by revising paragraph (k) to read as follows

**Section 90.203 Certification required.**

\* \* \* \* \*

(k) For transmitters operating on frequencies in the 220-222 MHz band, certification will only be granted for equipment with channel bandwidths up to 5 kHz, except that certification will be granted for equipment operating on 220-222 MHz band Channels 1 through 160 (220.0025 through 220.7975/221.0025 through 221.7975), 171 through 180 (220.8525 through 220.8975/221.8525 through 221.8975), and 186 through 200 (220.9275 through 220.9975/221.9275 through 221.9975) with channel bandwidths greater than 5 kHz

\* \* \* \* \*

Part 95 of Title 47 of the Code of Federal Regulations is amended as follows

- 29 The authority citation for Part 95 continues to read as follows

**AUTHORITY:** Secs. 4, 303, 48 Stat. 1066, 1082 as amended, 47 U.S.C. 154, 303.

- 30 Section 95.1115, paragraph (b)(1) is amended by replacing the term “μ/m” with the term “μV/m”

- 31 Section 95.1115, paragraph (b)(2) is amended by replacing the term “μm” with the term “μV/m”

## APPENDIX B: LIST OF COMMENTING PARTIES

Parties filing comments

1	ADEMCO Group	47	Flash Parlm
2	AdvaMed	48	Fred C. Jensen
3	Al Brittain	49	Frederick C. Gantzer
4	Albert Deshotel	50	Frederick Patton
5	Armadillo Intertie, Inc.	51	Galen K. Watts
6	ARRL, The National Association for Amateur Radio	52	Gap, Inc.
7	Bernard K. Skoch	53	Gary Rotter
8	Brian D. Allen	54	George Washburn
9	Brian James Jarchow	55	Harold Tate
10	Britain Rothrock	56	HID Corporation
11	Bruce Perens	57	Howard Malone
12	Bryan King	58	Hughes Network Systems, Inc.
13	Central States VHF Society	59	IBM Corporation
14	Chamberlain Group, Inc.	60	Information Technology Industry Council
15	Charles Byers	61	Interlogix, Inc.
16	Charles P. Adkins	62	Jack Daane
17	Chester Piotrowski	63	James A. Talbot, Jr.
18	Christian O. Hunt	64	James E. Reynolds
19	Christopher Howard	65	James Edwin Whedbee
20	Christopher J. Osburn	66	James Hayes
21	Cisco Systems, Inc.	67	Jeff Ballif
22	Cobra Electronics Corporation	68	Jeff Stidham
23	Comsearch	69	Jeffrey D. Taylor
24	Consumer Electronics Association	70	Jeffrey P. LaCrosse
25	Cubic Corporation	71	Jeffrey Peter Kershaw
26	Dale Drake	72	John Douglas Lamb
27	Daniel Kane	73	John L. D'Ausilio
28	DataBrokers, Inc.	74	John Paul Dooley
29	David A. Merriweather	75	John Robert Foulks
30	David Batzle	76	Johnson Controls, Inc.
31	David C. Counce	77	Jose Cadrecha
32	David Clark	78	Joseph A. Elcavage
33	David Donnelly	79	Joseph A. Naujokas
34	David H.M. Spector	80	Joseph H. Underwood
35	David Wilkinson	81	Joseph R. Semer
36	Deerik W. Shryock	82	Joseph S. Keer
37	Dennis Swanson	83	Kenneth P. Eckel, Jr.
38	Derwood Eadie	84	Kevin Gibson
39	Donald C. Karon	85	Kyle A. Yoksh
40	Doran S. Platt III	86	Lifeline Systems, Inc.
41	Dr. Andrew E. Mossberg	87	Linear Corporation
42	Dwight B. Hill	88	Loral Skynet
43	Enalasis Corporation	89	MagTek, Inc.
44	Eric M. Funderburk	90	Mark S. Seidler
45	Eric Schmidt	91	Martin Shinko
46	Escort, Inc. and BEL, Inc.	92	Mattel, Inc.

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93	Matthew Becker	139	Tighe W. Kuykendall
94	Melvyn L. Bernstein	140	Tom Masterson
95	Michael Brooks	141	TRP, Inc.
96	Michael J. Linden	142	Uniden America Corporation
97	Michael M. Bradley	143	United Telecom Council
98	Michael Swiderski	144	Verlin E. Reiter
99	Mike Baugh	145	Vincent F. DiMalta
100	Mike Moreken	146	VYTEK Solutions, Inc.
101	Miller Edge, Inc.	147	Wacom Technology Corp.
102	MOBA Systeme	148	Warren Bruene
103	Morris Jones	149	Warren J. Dickie
104	Motorola, Inc.	150	William A. Tynan
105	National Aeronautics and Space Administration	151	William F. Osler
106	Nicholas S. Frost	152	William Owens
107	Nickolaus E. Leggett	153	XM Radio, Inc.
108	Operator Specialty Company, Inc.		
109	PanAmSat Corporation		
110	Paul J. Tringas		
111	Pete Myers		
112	Philips Semiconductors		
113	Polhemus, Inc.		
114	Power Line Communications Association		
115	RADAR Members		
116	Ray Todd Stevens		
117	Richard Adamo		
118	Richard Lourette		
119	Rick Eastwood		
120	Roadrunners Microwave Group		
121	Robert Brown		
122	Robert S. Bennett		
123	Robert Winkworth		
124	Safety Warning System, L. C.		
125	Sanjay Kapur		
126	Satellite Industry Association		
127	Savi Technology, Inc.		
128	SES Americom, Inc.		
129	Short Range Automotive Radar Frequency Allocation Group		
130	Shure Incorporated		
131	Sirius Satellite Radio, Inc.		
132	Spacenet, Inc. and StarBand Communications, Inc.		
133	Steven Bryant		
134	Telecommunications Industry Association		
135	Texas Instruments		
136	Texas VHF-FM Society, Inc.		
137	The Genie Company		
138	The Whistler Group, Inc.		

Parties filing reply comments

- |   |  |
|---|--|
| 1 Ademco Group  | 46 Sirius Satellite Radio, Inc.                    |
| 2 Amateur Television Network                                  | 47 Sky A. Borgenhagen                              |
| 3 American Council of Independent<br>Laboratories             | 48 Stanley Vandiver                                |
| 4 ARRL, The National Association of<br>Amateur Radio          | 49 Steven Handler                                  |
| 5 Arthur T. Farrand   | 50 Texas Instruments                               |
| 6 Brent D. Oots   | 51. The Chamberlain Group, Inc.                    |
| 7 Bruce D. Hornblack  | 52 Timothy Thomas Lanners                          |
| 8 Calvin Keli Lunny   | 53 TRP, Inc.                                       |
| 9 Charles E. Quentel, III                                     | 54 Upper New York Repeater Council, Inc.           |
| 10 Christopher Nelson   | 55 Ward Wheaton                                    |
| 11 Current Technologies                                       | 56 Western Washington Amateur Relay<br>Association |
| 12 Curtis V. Roche  | 57. William Richards                               |
| 13 Daniel J. Serafini   | 58 XM Radio, Inc.                                  |
| 14 Duane Whittingham  |  |
| 15 Edwin S. Toal  |  |
| 16 Escort Incorporated and BEL<br>Incorporated                |  |
| 17 Gerald W. Murray   |  |
| 18 Glenn Pederson   |  |
| 19 Harold C. Arnold   |  |
| 20 Hughes Network Systems, Inc.                               |  |
| 21 Illinois Repeater Association, Inc.                        |  |
| 22 Indiana Repeater Council                                   |  |
| 23 Interlogix, Inc.   |  |
| 24 Intersil Corporation                                       |  |
| 25 James Anderson   |  |
| 26 John A. Weeks  |  |
| 27 Kevin D. Adam  |  |
| 28 Lloyd W. Fink  |  |
| 29 Martin H. Leider   |  |
| 30 Martin Wilcoxson   |  |
| 31 Matthew Hamm   |  |
| 32 Matthew T. Weeks   |  |
| 33 Michael J. Borowiec  |  |
| 34 Moody Law  |  |
| 35 Motorola, Inc.   |  |
| 36 Patrick T. Weeks   |  |
| 37 RADAR Members  |  |
| 38 Ray Todd Stevens   |  |
| 39 Retlif Testing Laboratories                                |  |
| 40 Richard Kelly  |  |
| 41 Satellite Industry Association                             |  |
| 42 Savi Technology, Inc.                                      |  |
| 43 SES Americom, Inc.   |  |
| 44 Seymour Hersh  |  |
| 45 Short Range Automotive Radar<br>Frequency Allocation Group |  |

## APPENDIX C: FINAL REGULATORY FLEXIBILITY ANALYSIS

As required by the Regulatory Flexibility Act (RFA),<sup>170</sup> an Initial Regulatory Flexibility Analysis (IRFA) was incorporated in the *Notice of Proposed Rule Making and Order, Review of Part 15 and other Parts of the Commission's Rules (Notice)*.<sup>171</sup> The Commission sought written public comments on the proposals in the Notice, including comment on the IRFA.<sup>172</sup> This Final Regulatory Flexibility Analysis conforms to the RFA.<sup>173</sup>

### A. Need for, and Objectives of, the Second Report and Order and Memorandum Opinion and Order

Section 11 of the Communications Act of 1934, as amended, and Section 202(h) of the Telecommunications Act of 1996 require the Commission (1) to review biennially its regulations pertaining to telecommunications service providers and broadcast ownership, and (2) to determine whether economic competition has made those regulations no longer necessary in the public interest. The Commission is directed to modify or repeal any such regulations that it finds are no longer in the public interest.

As part of the biennial review for the year 2000, the Commission reviewed its regulations pertaining to telecommunications service providers and broadcast ownership and recommended a number of changes to those rules. While not specifically required by statute, the Commission also reviewed Parts 2, 15 and 18 as part of this process.

The Second Report and Order and Memorandum Opinion and Order makes several changes to Part 15 and other parts of the rules. Specifically, it

- 1) Relaxes the restricted band emission limits for the second and third harmonics of low-power transmitters operating in the 24.0-24.25 GHz band
- 2) Removes the restriction on data transmissions by remote control device because it may hinder the development of new types of devices, and the distinction between control signals and data signals is becoming increasingly blurred.
- 3) Relaxes the requirements for radio frequency identification (RFID) systems operating at 13.56 MHz to allow faster data transmission. RFID systems use a small transmitter attached to an item that transmits data identifying the item.
- 4) Streamlines the labeling process for equipment authorized under the Declaration of Conformity (DoC).

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<sup>170</sup> See 5 U.S.C. § 603. The RFA, see 5 U.S.C. § 601 *et seq.*, has been amended by the Contract With America Advancement Act of 1996, Pub. L. No. 104-121, 110 Stat. 847 (1996) (CWAAA). Title II of the CWAAA is the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA).

<sup>171</sup> See *Notice of Proposed Rule Making and Order* in ET Docket No. 01-278, 16 FCC Rcd 18205 (2001).

<sup>172</sup> *Id.*

<sup>173</sup> See 5 U.S.C. § 604. We also note that, given the deregulatory nature of our action, we may certify this action under 5 U.S.C. § 605.

procedure. As equipment becomes smaller, it becomes more difficult to include all the information currently required on the label.

- 5) Changes the authorization requirement from certification to verification (no application required) for transmitters operating below 490 kHz in which all emissions are at least 40 dB below the Part 15 limit.
- 6) Make minor corrections and updates to Part 15 and other parts of the rules.

**B. Summary of Significant Issues Raised by Public Comments in Response to the IRFA**

None

**C. Description and Estimate of the Number of Small Entities To Which the Proposed Rules Will Apply**

The RFA directs agencies to provide a description of and, where feasible, an estimate of the number of small entities that may be affected by the proposed rules, if adopted.<sup>174</sup> The RFA generally defines the term "small entity" as having the same meaning as the terms "small business," "small organization," and "small governmental jurisdiction."<sup>175</sup> In addition, the term "small business" has the same meaning as the term "small business concern" under the Small Business Act.<sup>176</sup> A small business concern is one which (1) is independently owned and operated; (2) is not dominant in its field of operation, and (3) satisfies any additional criteria established by the SBA.<sup>177</sup>

The SBA has developed small business size standards for two pertinent Economic Census categories, "Radio and Television Broadcasting and Communications Equipment" (RTB) and "Other Communications Equipment," both of which consist of all such companies having 750 or fewer employees.<sup>180</sup> According to Census Bureau data for 1997, there were a total of 1,215 establishments in the first category, total, that had operated for the entire year.<sup>181</sup> Of this total, 1,150 had 499 or fewer

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<sup>174</sup> 5 U.S.C. § 604.

<sup>175</sup> 5 U.S.C. § 601(6).

<sup>176</sup> 5 U.S.C. § 601(3) (incorporating by reference the definition of "small business concern" in 15 U.S.C. § 632). Pursuant to the RFA, the statutory definition of a small business applies "unless an agency, after consultation with the Office of Advocacy of the Small Business Administration and after opportunity for public comment, establishes one or more definitions of such term which are appropriate to the activities of the agency and publishes such definition(s) in the Federal Register." 5 U.S.C. § 601(3).

<sup>177</sup> Small Business Act, 15 U.S.C. § 632 (1996).

<sup>180</sup> 13 C.F.R. § 121.201, NAICS codes 334220, 334290.

<sup>181</sup> U.S. Census Bureau 1997 Economic Census, Industry Series: Manufacturing, Radio and Television and Wireless Communications Equipment Manufacturing, "Industry Statistics by Employment Size 1997," Table 4, NAICS code 334220 (issued Aug. 1999). The number of "establishments" is a less helpful indicator of small business prevalence in this context than would be the number of "firms" or "companies," because the latter take into account the concept of common ownership or control. Any single physical business location is an establishment, and that location and others may be under the common ownership of a given firm. Thus, the numbers given in text may reflect inflated numbers of businesses in this category, including the numbers of small businesses. Census data in this context are available only for establishments.

employees, and an additional 37 establishments had 500 to 999 employees<sup>182</sup> Consequently, we estimate that the majority of businesses in the first category are small businesses that may be affected by the rules and policies adopted herein Concerning the second category, the data for 1997 show that there were a total of 499 establishments that operated for the entire year.<sup>183</sup> Of this total, 491 had 499 or fewer employees, and additional 3 establishments had 500 to 999 employees<sup>184</sup> Consequently, we estimate that the majority of businesses in the second category are small businesses that may be affected by the rules and policies adopted herein

#### **D. Description of Projected Reporting, Recordkeeping, and Other Compliance Requirements**

The Second Report and Order and Memorandum Opinion and Order streamlines the labeling requirements for equipment authorized under the Declaration of Conformity (DoC) procedure DoC is a self-approval procedure in which the manufacturer has the equipment tested for compliance at a laboratory accredited to make the required measurements There is an alternative procedure that allows personal computers to be assembled using compliant motherboards and power supplies with no additional testing required Equipment that complies with the applicable rules may be marketed without an approval from the Commission, and must be labeled as specified in Part 15 of the rules. The Second Report and Order and Memorandum Opinion and Order eliminates the requirement for the phrase "For home or office use" to appear on the label for all equipment subject to DoC. In addition, it eliminates the requirement for the phrase "Tested to comply with FCC standards" to appear on the label for equipment that was tested as a complete unit, although this phrase will still be required on personal computers that were assembled from tested components. These changes will permit smaller labels on equipment. These changes will not be required, and small entities can change labels as they change and upgrade models.

The Second Report and Order and Memorandum Opinion and Order incorporates the ANSI C63 17-1998 procedure into the Part 15 of the rules by reference as the procedure the Commission will use for testing unlicensed Personal Communication Service (PCS) equipment for compliance Our rules already provide that unlicensed PCS equipment must comply with a number of specialized technical requirements designed to prevent interference between devices. Specifically, there is a defined "spectrum etiquette" that requires unlicensed PCS transmitters to monitor the spectrum for other users before transmitting, and to use a defined transmission format There was no procedure listed in the rules for testing unlicensed PCS equipment to these requirements The American National Standards Institute (ANSI) C63 Committee recently completed work on a procedure for measuring unlicensed PCS equipment, which the Second Report and Order incorporates into the rules as the procedure that the Commission will use.

Part 15 referenced the ANSI C63 4-1992 procedure as the one that will be used for testing most intentional and unintentional radiators for compliance with the rules The ANSI C63 Committee recently completed a minor revision of the ANSI C63 4-1992 procedure that contains a number of clarifications to the testing procedures The Second Report and Order and Memorandum Opinion and Order references the new C63 4-2001 procedure in place of the older version as the procedure that manufacturers should use for compliance testing

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<sup>182</sup> *Id*

<sup>183</sup> U.S. Census Bureau, 1997 Economic Census, Industry Series Manufacturing, Other Communications Equipment Manufacturing, "Industry Statistics by Employment Size 1997," Table 4, NAICS code 334290 (issued Sept. 1999)

<sup>184</sup> *Id*

The Second Report and Order and Memorandum Opinion and Order changes the temperature range for frequency stability measurements on transmitters used in the Family Radio Service (FRS) under Part 95 of the rules. Most transmitters used in licensed services are required to maintain their carrier frequency within a specified tolerance over a range of voltage and temperature variations to minimize the probability of interference to other users. At the time the FRS was established in 1996, a frequency stability limit was specified for transmitters, but no temperature range was specified. The Commission staff informally interpreted that measurements must be made to -20 degrees centigrade. A 1998 rule change to the equipment authorization requirements unintentionally resulted in a new requirement to measure FRS transmitters to -30 degrees centigrade. However, the staff continued requiring measurements to -20 degrees centigrade in the interest of fairness. To clarify our existing practice, the Second Report and Order and Memorandum Opinion and Order specifically requires that FRS transmitters be measured to -20 degree centigrade as the staff has been requiring since 1996.

**E. Steps Taken to Minimize Significant Economic Impact on Small Entities, and Significant Alternatives Considered**

The RFA requires an agency to describe any significant alternatives that it has considered in reaching its proposed approach, which may include the following four alternatives (among others). (1) the establishment of differing compliance or reporting requirements or timetables that take into account the resources available to small entities, (2) the clarification, consolidation, or simplification of compliance or reporting requirements under the rule for small entities, (3) the use of performance, rather than design, standards, and (4) an exemption from coverage of the rule, or any part thereof, for small entities.<sup>185</sup>

As noted in Section D, *supra*, the changes adopted in the Second Report and Order and Memorandum Opinion and Order are deregulatory in nature, which we expect will simplify compliance and reporting requirements for all parties, particularly small entities. For example, we reduced the amount of information required on the label for products authorized through the Declaration of Conformity self-approval process. Manufacturers will be permitted to use the simplified label as soon as the rules become effective, but are not required to do so.

Report to Congress The Commission will send a copy of the Second Report and Order and Memorandum Opinion and Order, including this FRFA, in a report to be sent to Congress pursuant to the Congressional Review Act, *see* 5 U.S.C. § 801(a)(1)(A). In addition, the Commission will send a copy of the Second Report and Order and Memorandum Opinion and Order, including FRFA, to the Chief Counsel for Advocacy of the Small Business Administration. A copy of the Second Report and Order and Memorandum Opinion and Order and FRFA (or summaries thereof) will also be published in the Federal Register. *See* 5 U.S.C. § 604(b).

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<sup>185</sup> *See* 5 U.S.C. § 603(c).